# **EXHIBIT C**

Investigative Report
148 Gansett Road
Woods Hole, MA 02543
Date of Loss: 01/21/03
By: Joseph Folger, IAAI-CFI and
Thomas J. Klem, Fire Protection Engineer, IAAI-CFI
September 19, 2004

## Background

On January 21, 2003, at approximately 11:59 P. M. the Falmouth, Massachusetts, Fire Department received notification and responded to a structure fire at 148 Gansett Road within the Town of Falmouth. Upon their dispatch, response and arrival at the scene, firefighters observed heavy fire at the kitchen area of the home. The fire department reported that the advanced state of the fire, the extreme weather conditions including freezing temperatures and brisk winds from the ocean, and initial low water pressure presented difficult challenges for control and suppression of the fire (also see later details).

The one and one-half story wood-frame dwelling had brick veneer exterior walls, a slate roof and attached two-car garage. Documents indicate that the home contained a combination fire and burglar alarm system designed to automatically notify a private monitoring company upon the receipt of an automatic alarm within the home. The fire protection alarms included both smoke and heat detectors. It appears that the smoke detectors were positioned near stairway openings, and adjacent to bedroom areas as would be required to comply with the Massachusetts fire code and national consensus fire protection standards at the time of their installation in 1983. The investigation of the fire determined that an automatic alarm (low temperature) sounded for the property

Page 3 of 20

at 11:49 P. M. and the alarm/monitoring company, Intercity Alarms, notified the caretaker of the property of the incident and during his initial investigation he observed an advanced fire in the kitchen area of the home. The caretaker initially tried to enter the property but then returned to his residence to report the fire to the fire department.

The residence is located in a private community in the Woods Hole section of Falmouth, Massachusetts. The single-family dwelling is used mostly by the Phyllis MacNeil family during the summer months and thus was unoccupied at the time of the fire. However, on the day of the fire (and some weeks prior to the fire) minor renovations to the home were occurring by the caretaker of the property, Mr. John Vose. Mr. Vose reported to fire officials and later to our investigators that work was underway the day of the fire in the kitchen and basement area of the home. The renovations involved refinishing the kitchen cabinets and other minor tasks being undertaken by a total of four individuals that day.

Soon after extinguishing the fire Deputy Fire Chief Glen Rogers, Falmouth Fire Department and Trooper Francis McGinn, State Fire Marshal's Office, initiated an investigation into the cause of the fire. The investigation included an examination of the fire scene and various interviews including an interview with Mr. Vose. Based on the physical evidence that the onsite investigative team established, including reconstruction of a suspected area of fire origin and statements from witnesses to the initial fire conditions within the home. Trooper McGinn and the investigative team determined that the area of origin was the

kitchen and the ignition scenario was the smoldering ignition of combustible materials that the worker(s) had been placed on the electric stove cook top. The heat of ignition was established to be one of the four burners of the electric cook top that apparently been accidentally turned to an "on" position sometime during the time the workers were within the home. The last worker reportedly left the home at about 5:00 P. M. The fire department investigation found remains of cabinet-like materials and contents on the stovetop and documented fire growth patterns consistent with this ignition scenario. The stovetop was retained by Chief Rogers and a subsequent examination of the stovetop by the chief and investigators from T. J. Klem and Associates determined that one of the control knobs was in the "on" position.

On January 22, 2003, this reporting investigator, Joe Folger, was notified by Tom Klem, of T. J. Klem and Associates, of the loss in Woods Hole, Massachusetts. Mr. Klem had been notified by Mr. James Tagliente, of the Chubb Group of Insurance Companies. Mr. Tagliente further provided Mr. Klem with the name of the insured, Ms. Phyllis MacNeil, who was provided coverage through the Chubb Group of Insurance Companies. Mr. Klem was requested to conduct an origin and cause investigation of the fire loss. Mr. Klem provided me with an initial overview of the fire and requested that I go to the scene and evaluate what would be necessary to conduct an on scene investigation with him the following day. This report presents the results and analysis of our independent investigation of the loss and cites the significant factors resulting in the total destruction of the MacNeil home. Our investigative efforts included

onsite documentation and analysis of the fire scene, interviews with Mr. Vose, MacNeil family members Laurie Mannix and Bruce MacNeil, and our efforts also included coordination and discussions with the public sector fire investigators. Subsequent to these efforts we reviewed deposition transcripts of Chief Rogers, Mr. Vose and of Mr. Ken Elliott of Intercity Alarms. These data included schematics of the home, fire protection equipment location, and public sector fire investigative reports and photographs.

### Our Investigation

On January 22, 2003, investigator Folger went to Woods Hole, MA and he observed a total loss of the property at 148 Gansett Road. A large excavator was working at the scene and had already knocked all debris into the cellar hole. Unable to safely conduct an on scene investigation at this time, he went to the Falmouth Fire Department to obtain the incident report and speak with Deputy Chief Glen Rogers. Deputy Rogers investigated the fire with Trooper Frank McGinn, State Fire Marshal's Office. Deputy Rogers stated that he and Trooper McGinn determined that the fire started in the kitchen, the point of origin being at the electric cooktop that was built into the kitchen counter. Deputy Rogers said that Mr. John Vose was working in the kitchen the day of the fire and placed a kitchen drawer on top of the cooktop. Deputy Rogers took the cooktop as evidence and arrangements were made to examine the cooktop the following day.

On January 23, 2003, investigator Folger accompanied investigator Klem to the fire scene at 148 Gansett Road, Woods Hole, MA. Investigator Klem

photographed the scene while investigator Folger initially interviewed Mr. John Vose. An additional interview was also conducted with Mr. Vose as additional information was assembled during the course of our onsite investigation. Using standard fire investigative procedures our onsite examination assessed the area and level of fire origin, associated fuel packages and likely fire spread variables. Further, we recovered wood finish materials used by Mr. Vose to refinish the cabinets and examined and undamaged exemplar material provided to us by Mr. Vose. Finally, we assessed the condition of appliances and utility services within the home in our cause determination efforts and discussed smoking practices of the workers with Mr. Vose during the renovations.

#### Interview

Mr. John Vose resides at 188 Gansett Road, not far from the MacNeil property. Mr. Vose stated he is the caretaker for the MacNeil property and was renovating the kitchen for Ms. MacNeil. On the day of the fire John, his two sons and Robert Martinez were working in the kitchen refinishing the kitchen cabinets and applying a coat of polyurethane. All the drawers were pulled out of the cabinets and placed on the countertops. John stated that he is pretty sure he set a drawer on top of the electric cooktop and maybe accidentally hit one of the knobs turning the stove on. At first Mr. Vose said he placed the drawer on the cooktop around 2:00 p. m. but later said it was before noon. He locked the house and left at 5:15 p. m. At 11:49 p. m. his wife received a telephone call from Intercity Alarms Inc., stating a "low temperature sensor went off" at the MacNeil residence. Mr. Vose walked over to the house and observed a fire in the kitchen,

in the area of the cooktop. He initially attempted to enter the home but then went back home and called the Falmouth Fire Department. He said when the fire department arrived the fire was already through the roof with heavy fire in the kitchen area.

After the interview with Mr. Vose investigators Folger and Klem met with Deputy Rogers at the Falmouth Fire Station where the cooktop was located. The cooktop appliance was identified as Thermador, 5551 McFadden Avenue, Huntington Beach, CA 92649. Examination of the cooktop revealed that the plastic-type control knobs were melted off but close examination of the metal control stems showed that one of the stems was turned to the "on" position.

On January 25, 2004, investigator Folger called Mr. Vose to get the telephone number of Robert Martinez and to ask if he recalled anything that he may have forgotten to tell me about the incident. He went over the details of the events that took place the day of the fire and restated them to investigator Folger exactly as he had done previously.

#### Conclusions

The physical evidence examined by our investigators and the initial witness' observations indicates that the point of origin of this fire was indeed on the Thermador cooktop in the kitchen of the home. Other ignition scenarios were also assessed such as smoking materials, etc. but they were eliminated from further consideration because of the lack of corroborating physical evidence and/or of witness statements (etc.) that would warrant further and more in-depth assessment. In this regard it should be noted that the product being used on the

cabinets was non-combustible and was identified as Premium Quality Aqua Zar, a water-based polyurethane. Thus this material on rags, etc. is not susceptible to spontaneous combustion.

The ignition scenario for this fire determined by our investigators to be the ignition the wooden cabinet component that had been placed on the electric stove's countertop. The evidence established in this case determined that one of the surface burners was in the "on" position leading to the smoldering ignition of the wood-cabinet material and its contents. Prolonged smoldering of the fire continued undetected until some time before the automatic low temperature alarm was received by the monitoring company, Intercity alarms and the phone call and assessment by Mr. Vose determined that a severe, advanced fire was present within the kitchen area of the MacNeil home. From a fire protection perspective, this is an unusual sequencing of alarm notification and the lack of early detection of the fire within a controllable state has been determined to be a significant factor in our analysis of this fire incident.

In this regard, considering the prolonged length of the smoldering fire and the close proximity of an adjacent smoke detector to the kitchen, raises technical questions regarding the adequate performance of the fire alarm system to the fire. Among the questions are details regarding the maintenance of the system. including replacement of the initially installed smoke detectors after ten years of operation as required by The National Fire Alarm Code, NFPA 72. Considering the ignition scenario of this fire and the position of an adequately installed and maintained smoke detection system (arranged with automatic notification of a

monitoring company) the detection and reporting of this fire should have occurred while the fire was in the incipient stage and while it was in the controllable state upon arrival of the fie department.

Further, the type of automatic alarm received the night of the fire, delayed the notification of the fire department for 10 minutes. Typical fire growth rates in residential-type environments, such as this, result in room flashover within this time interval (and less many times). At flashover and considering this typical "open plan residential design" smoke and other combustion products have, no doubt, spread throughout the upper two floors of the home at this time. Rapid manual fire suppression of the fire at this point is no longer possible and significant fire damage will result, independent of the previously mentioned additional obstacles encountered by the fire department upon arrival at the fire scene. Had automatic fire detection and reporting of the fire to the fire department been sooner, as should have occurred considering the fire protection within the home, the property damage to the property would have been much more limited.

Our investigators reserve the right to supplement our analysis the of this incident if additional data becomes available.

Thomas J. Klem, MScFPE, CFI-IAAI

Fire Protection Engineer

T. J. Klem and Associates, LLC

Approach to the home along its driveway from Gansett Road.



General conditions found by our investigators.



An additional view of the destruction of the home.



Our investigators examined these and other appliances, etc. from the home.



Remains of the kitchen area.



Another view of the kitchen area.

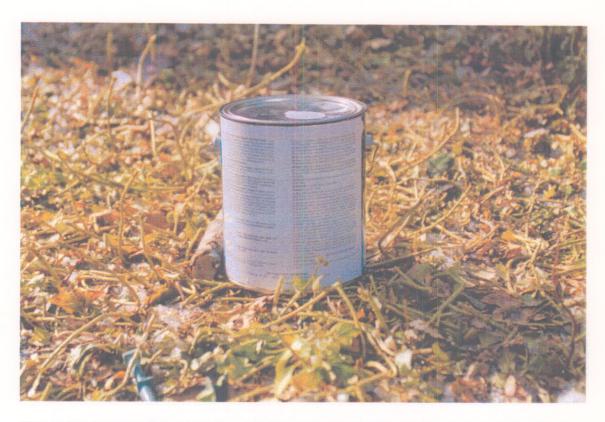
14



Basement area of the home indicates that it was not the level of fire origin.



Exemplar material being used to refinish the kitchen cabinets.



The material was determined not to be susceptible to spontaneous combustion.



Examination of the stovetop at fire department headquarters.



Our examination determined that one of the control knobs was in the "on" position.